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**A revision of *Leptobium* CASEY. VI. A revalidation, a new synonymy, and additional records  
(Coleoptera: Staphylinidae: Paederinae)**

V. ASSING

**A b s t r a c t :** *Leptobium tronqueti* LECOQ 1986, previously a synonym of *L. korbi* (EPPELSHEIM 1891), is revalidated. The male sexual characters of *L. korbi*, as well as the female secondary sexual characters of *L. korbi* and *L. tronqueti* are described and illustrated for the first time. The following synonymy is established: *L. nigricolle* (WOLLASTON 1862) = *Dolicaon canariensis* FAUVEL 1898, nov.syn. Additional records of 14 *Leptobium* species are reported from the Western Palaearctic region. The genus now includes 65 species and two subspecies.

**K e y w o r d s :** Coleoptera, Staphylinidae, Paederinae, *Leptobium*, Palaearctic region, taxonomy, revalidation, new synonymy, new records.

**Introduction**

According to a recent revision, the Palaearctic genus *Leptobium* CASEY 1905 includes a total of 64 valid species, with one species from Morocco and the Canary Islands represented by four subspecies (ASSING 1999, 2005, 2006, 2009a, 2009b, 2009c). The vast majority of species is distributed in the Mediterranean region.

Since the latest instalment to the revision, additional material has become available from several museum collections and private collectors. This material yielded several additional records of zoogeographic interest and a new synonymy. Also, based on an examination of new and large samples, it was discovered that what was previously regarded as *L. korbi* (EPPELSHEIM 1891) is in fact a mixture of at least two species. As a result, *L. tronqueti* LECOQ 1986, a name recently synonymised with *L. korbi*, is revalidated. The genus now comprises 65 species and two subspecies.

**Material, methods, and measurements**

The material referred to in this study is deposited in the following public institutions and private collections:

NHMD ..... Natural History Museum Denmark/ University of Copenhagen Zoological Museum (A. Solodovnikov)

NHMW ..... Naturhistorisches Museum Wien (H. Schillhammer)

cAss..... author's private collection

cFel ..... private collection B. Feldmann, Münster

cSme..... private collection A. Smetana, Ottawa

cWun..... private collection P. Wunderle, Mönchengladbach

The morphological studies were carried out using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena). A digital camera (Nikon Coolpix 995) was used for the photographs.

Head length was measured from the anterior margin of the frons to the posterior margin of the head, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra.

## Results

### *Leptobium gracile* (GRAVENHORST 1802)

**Material examined:** Morocco: 4 exs., Azrou-Ifrane area, 1400-2000 m, 17.-19.IV.1989 (NHMD, cAss). Spain: 3 exs., Andalucía, Cádiz, 4 km NNW Tarifa, 36°01'N, 5°37'W, 10 m, road margin, flooded meadow, under stones, 26.XII.2009, leg. Assing & Wunderle (cAss, cWun). Italy: Lombardia: 1 ex., Rocca di Georgi (PV), 14.IV.2006, leg. Monzini (cAss). Basilicata: 2 exs., Scansano Lido (MT), 15.VIII.1998, leg. Angelini (NHMD); 1 ex., Genzano Lago Serra di Corno (MT), 22.IX.1996, leg. Angelini (cAss); 9 exs. [partly teneral], Matera, Gravina F. Bradano, light trap, 26.VII.1993, leg. Angelini (NHMD, cAss); 5 exs., Colobraro (MT), Sinni river, 180 m, 11.I.1998, leg. Angelini (NHMD); 3 exs., Colobraro (MT), 180 m, 11.I.1998, leg. Angelini (NHMD, cAss). Puglia: 1 ex., San Basilio (TA), 12.V.1990, leg. Angelini (NHMD); 9 exs., Taranto, estuary of Lato river, 14.IX.2003, leg. Angelini (NHMD). Calabria: 2 exs., Crotone, meadow, 8.III.1998, leg. Angelini (NHMD); 2 exs., Crotone, Esaro river, 26.X.2003, leg. Angelini (NHMD); 2 ex., Aspromonte, Piani lunco, Gerace (RC), 14.IV.1997, leg. Angelini (NHMD). Greece: 1 ex., Makedhonia, Xanthi, Lake Vistonida, 26.V.2007, leg. Angelini (NHMD); 2 exs., Karterai, 50 m, swamp, 14.V.2005, leg. Angelini (NHMD); 1 ex., Meteora (NHMD). Turkey: 2 exs., Bursa, Keles-Eşen, 1100 m, grassland, 2.V.1995, leg. Enghoff et al. (NHMD, cAss); 2 exs., Burdur, pass SE Altınyayla, 1300 m, 6.IV.1992, leg. Heinz (cSme, cAss).

**Comment:** *Leptobium gracile* is the most widespread and common species of the genus, its distribution ranging from the Canary Islands to Middle Asia; for a map illustrating its distribution see ASSING (2005).

### *Leptobium illyricum* (ERICHSON 1840)

**Material examined:** Montenegro: 2 exs., Boka, Prčah, 20 m, 18.VII.2009, leg. Stevanović (cAss). Albania: 1 ex., Vlorë, Llogora pass, 1025 m, 29.IV.1993, leg. Heinz (cSme). Greece: 1 ex., Pelopónnisos, Ahaia, Erimanthos, Kalentzi, 1100 m, 3.V.2004, leg. Angelini (NHMD).

**Comment:** The Ponto-Mediterranean distribution of this species is illustrated in ASSING (2005).

***Leptobium syriacum* (SAULCY 1865)**

**M a t e r i a l   e x a m i n e d :** Israel: 2 exs., N-Golan, Hermon Reserve, 1500 m, 29.III.-5.IV. 1995, leg. Heinz (Sme, cAss).

**C o m m e n t :** *Leptobium syriacum* is widespread in the Eastern Mediterranean; for a distribution map see ASSING (2005).

***Leptobium densiventre* (FAUVEL 1875)**

**M a t e r i a l   e x a m i n e d :** Tunisia: 1 ex., 5 km E Tamera, 21.-25.III.1986 (NHMD); 1 ex., 13 km N Ain Draham, 22.-24.III.1986 (NHMD). Italy: 3 exs., Sicilia, Maletto (ME), ctr. S. Venera, 8.V.2007, leg. Angelini (NHMD, cAss).

**C o m m e n t :** *Leptobium densiventre* is widespread in North Africa and Sicily; for a distribution map see ASSING (2005).

***Leptobium wunderlei* BORDONI 1994**

**M a t e r i a l   e x a m i n e d :** Turkey: Antalya: 4 exs., Gedevit-yayla near Alanya, 10.IV.1992, leg. Heinz (Sme, cAss); 2 exs. [det. Feldmann], Alanya, Incekum, 26.XI.2009, leg. Röwekamp (cFel).

**C o m m e n t :** The distribution of this species is confined to the east of Antalya province, southern Turkey (ASSING 2005).

***Leptobium doderoi* (GRIDELLI 1926)**

**M a t e r i a l   e x a m i n e d :** Spain: 1 ♀, Andalucía, Cádiz, 25 km NNW Ubrique, Puerto de Galis, 36°34'N, 5°36'W, 400 m, W-exposed oak forest with *Rhododendron*, sifted, 28.XII.2009, leg. Wunderle (cWun).

**C o m m e n t :** *Leptobium doderoi* is endemic to the extreme south of the Iberian peninsula; its distribution is mapped in ASSING (2005).

***Leptobium pominii* (GRIDELLI 1949)**

**M a t e r i a l   e x a m i n e d :** Italy: 2 exs., Puglia, Gargano, Foresta Umbra (FG), Coppa Umbra, beech forest, 3.III.2000, leg. Angelini (NHMD, cAss).

**C o m m e n t :** *Leptobium pominii* is endemic to the Gargano range in southern Italy (ASSING 2005).

***Leptobium subglaciale* (KOCH 1937)**

**M a t e r i a l   e x a m i n e d :** Morocco: 2 exs., Asni env., 1100-1400 m, 8.-10.IV.1989 (NHMD, cAss).

**C o m m e n t :** The distribution of *L. subglaciale* is confined to the Haut Atlas, Morocco (ASSING 2005).

***Leptobium nigricolle nigricolle* (WOLLASTON 1862)**

*Dolicaon canariensis* FAUVEL 1898: 97; **nov.syn.**

*Dolicaon wollastoni* COIFFAIT 1954: 98.

**Material examined:** Canary Islands: Fuerteventura: 1 ex., S Vega de Rio de las Palmas, Risco Blanco, 450 m, 5.I.1990, leg. Báez & Enghoff (NHMD); 2 exs., Jandia: N Morro Jable, Morro de Cavedero, 700 m, 4.I.1990, leg. Báez & Enghoff (NHMD, cAss). Gran Canaria: 3 exs., Bco. de Mogán, below Roque Pernal, 350 m, 29.XII.1989, leg. Báez & Enghoff (NHMD, cAss); 1 ex., Bco. de Veneguera, 320 m, 29.XII.1989, leg. Báez & Enghoff (NHMD); 1 ex., 3 km E Guia, 175 m, 2.I.1990, leg. Báez & Enghoff (cAss).

**Comment:** *Leptobium canariense* was previously treated as a subspecies of *L. nigricolle*, despite some occasional overlap in the characters distinguishing it from the nominate subspecies (ASSING 1999). Material studied in the meantime, however, revealed that this overlap is enormous, frequent, and not confined to exceptional cases. Therefore, the previous hypothesis that *L. canariense* should be distinct on the subspecific level can no longer hold, at least not based on morphological evidence, and *L. canariense* is placed in synonymy with *L. nigricolle nigricolle*, together with its junior synonym *L. wollastoni*.

### ***Leptobium venustum* (BAUDI 1848)**

**Material examined:** Israel: 1 ex., Regavim, 27.XI.2007, leg. Aßmann (cAss); 2 exs., Hazerim, 15.-16.II.1991, leg. Orbach (NHMD, cAss).

**Comment:** The distribution of *L. venustum* is confined to the Middle East; it is mapped by ASSING (2005).

### ***Leptobium obesum* (FAUVEL 1875)**

**Material examined:** Lebanon: 2 exs., Djebel Sannin near Faqra, 1900-2100 m, 17./31.V.1999, leg. Heinz (cSme, cAss); 3 exs., pass between Ainata and Bcharré, 2600 m, 18.-29.V.1999, leg. Heinz (cSme, cAss); 2 exs., above Bcharré, 2300 m, 18./28.V.1999, leg. Heinz (cSme).

**Comment:** The distribution of this rare species is confined to the Middle East (Lebanon, Israel) (ASSING 2005).

### ***Leptobium drusiacum* COIFFAIT 1969**

**Material examined:** Israel: 1 ex., Mt. Hermon, Man Valley, 1430 m, 4.V.1990, leg. Orbach (NHMD).

**Comment:** This very rare species is endemic to Mount Hermon (S-Lebanon, N-Israel) and has been recorded only once since its original description (ASSING 2005, 2009a).

### ***Leptobium tronqueti* LECOQ 1986; revalidated (Figs 11-12)**

*Leptobium tronqueti* LECOQ 1986: 357 f.

**Material examined:** Spain: Andalucía: 16 exs., Cádiz, 20 km N Tarifa, 100 m, 36°09'N, 5°38'W, loamy shore of reservoir, under stones, 29.XII.2009, leg. Assing & Wunderle (cAss, cWun); 7 exs., Cádiz, 20 km N Tarifa, 36°09'N, 5°38'W, 110 m, loamy pasture near reservoir shore, under stones, 30.XII.2009, leg. Assing & Wunderle (cAss, cWun); 2 exs., Cádiz, 20 km N Tarifa, 36°10'N, 5°38'W, 110 m, shore of reservoir, loamy pasture, under stones, 31.XII.2009, leg. Wunderle (cWun); 1 ex., Cádiz, 4 km NNW Tarifa, 36°03'N, 5°37'W, 10 m, road margin, flooded meadow, under stone, 26.XII.2009, leg. Wunderle (cWun).

**Comment:** Since the holotype of *L. tronqueti* and the previously examined addi-



tional material were externally indistinguishable from the female lectotype of *L. korbi*, the former was recently synonymised with the latter (ASSING 2005). However, an examination of the new material listed above and in the following section revealed that at least two species of very similar external morphology are present in the province of Cádiz, from where both *L. korbi* and *L. tronqueti* were described. Fortunately, it was possible to distinguish the females of both species based on their secondary sexual characters. Those of *L. tronqueti* are somewhat modified, probably an adaptation to the highly derived morphology of the aedeagus of the species (see illustrations in ASSING 2005). A subsequent re-examination and dissection of the lectotype of *L. korbi* in the collections of the NHMW eventually revealed that it is not conspecific with the holotype of *L. tronqueti*, which is consequently revalidated. The female secondary sexual characters are illustrated in Figs 11-12. For details on the separation of *L. tronqueti* and *L. korbi* see the following section.

A re-examination of the females in the collections of P. Wunderle and the author revealed that, with two exceptions (see material examined in the section on *L. korbi*), the specimens previously attributed to *L. korbi* refer, in fact, to *L. tronqueti*, suggesting that the latter is the more widespread and less rare species of the two. In one locality, both species were found together, but *L. tronqueti* was much rarer than *L. korbi*.

### ***Leptobium korbi* (EPPELSHEIM 1891) (Figs 1-10)**

*Dolicaon korbi* EPPELSHEIM 1891: 225 f.

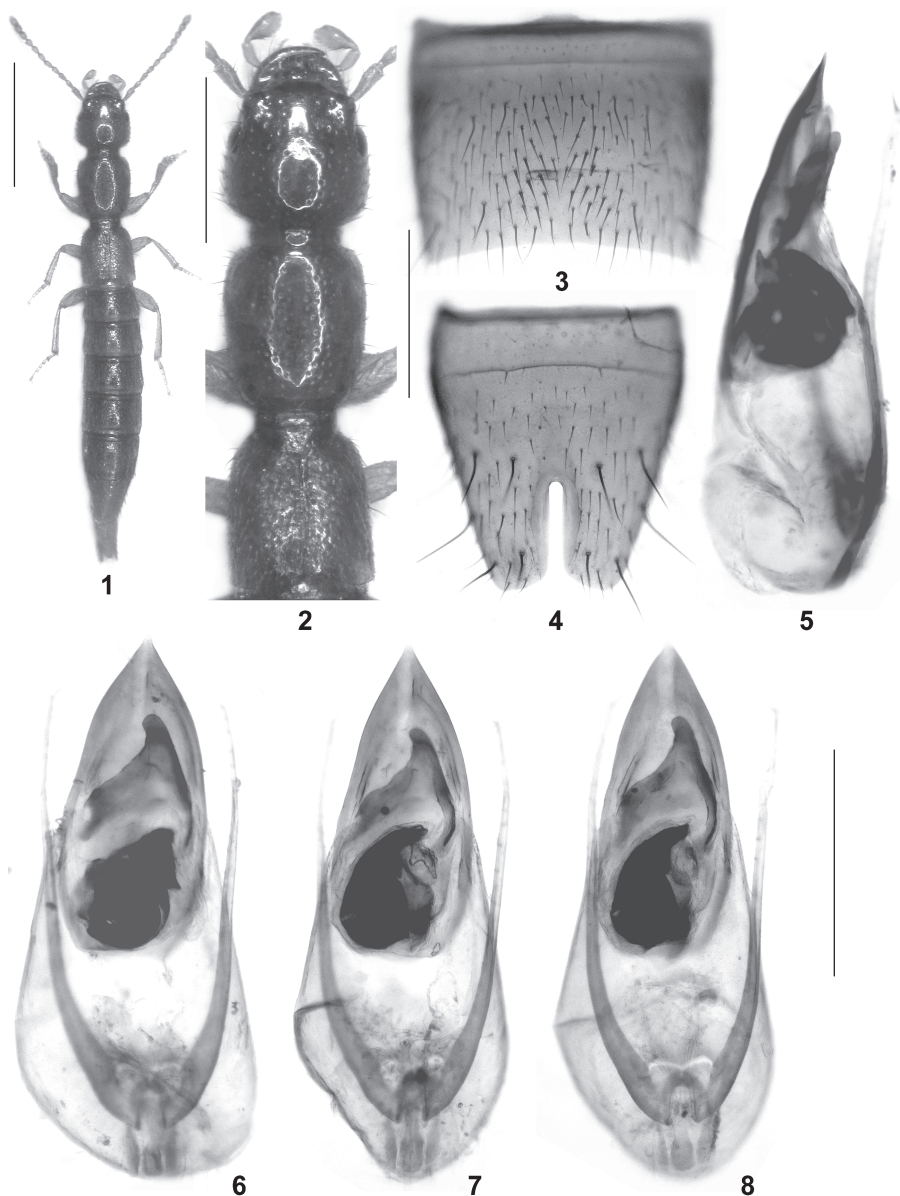
**Material examined:** Spain: Andalucía: 29♂♂, 26♀♀: Cádiz, 20 km N Tarifa, 36°10'N, 5°38'W, 110 m, shore of reservoir, loamy pasture after heavy rainfall, 31.XII.2009, leg. Assing & Wunderle (cAss, cWun); 1♀ [recorded as *L. korbi* in ASSING (2005)], Cádiz, W Tarifa, Tahivilla, 18.XII.1995, leg. Poot (cWun); 1♀ [recorded as *L. korbi* in ASSING (2005)]: Algeciras env., Sierra de Luna, 24.III.1974 (cAss).

**Comment:** The original description is based on "3 oder 4 Exemplaren" from Medina Sidonia (Cádiz) (EPPELSHEIM 1891), two of which, both females, were located and examined earlier; one of them was designated as the lectotype (ASSING 2005). Since the new material revealed that two species of highly similar external appearance are present in Cádiz province, the lectotype was re-examined and dissected. In size and head shape, it is more similar to *L. tronqueti*, but the female secondary sexual characters seem to rule out the possibility that both species are conspecific. The female sternite IX of the material listed above is similar to that of the lectotype. However, the shapes of the female tergite and sternite VIII are not identical and the body is slightly larger. At present, it is unclear if these differences are an expression of intraspecific variation, or if *L. korbi*, as interpreted here, is still a complex of two species. Nevertheless, until new material proving otherwise becomes available, the above specimens are referred to *L. korbi*. Since neither the male nor the female sexual characters of the true *L. korbi* were previously known and since the description of *L. korbi* in ASSING (2005) refers to *L. tronqueti*, the species is redescribed below.

**Redescription:** Body length with abdomen fully extended: 6.5-8.0 mm; habitus as in Fig. 1. Coloration: body uniformly reddish-brown, with the abdomen (especially segments V-VI) often weakly infusate; legs and antennae reddish.

Head approximately as wide as long; weakly oblong; macropunctuation coarse, moderately sparse, with interspersed micropunctuation. Eyes weakly projecting from lateral

contours of head and relatively small, approximately half the length of postocular region in dorsal view or slightly longer (Fig. 2).



**Figs 1-8:** *Leptobium korbi* (EPPELSHEIM): (1) habitus; (2) forebody; (3) male sternite VII; (4) male sternite VIII; (5) aedeagus in lateral view; (6-8) aedeagus in ventral view. Scale bars: 1: 2.0 mm; 2: 1.0 mm; 3-8: 0.5 mm.

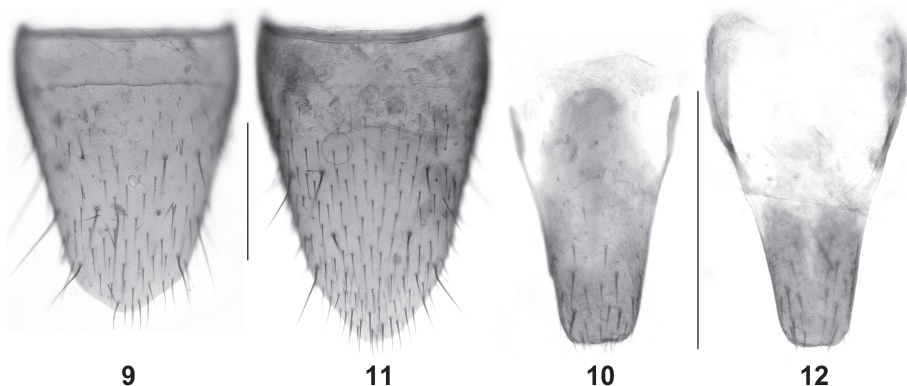
Pronotum approximately as wide as head and about 1.15 times as long as broad; lateral margins weakly convex in dorsal view; punctation on average somewhat less coarse than that of head (Fig. 2).

Elytra short, 0.65-0.70 times as long as pronotum (Fig. 2). Hind wings absent.

Abdomen approximately 1.05-1.10 times as wide as elytra at posterior margin; posterior margin of tergite VII without palisade fringe.

♂: pubescence of sternite VII not distinctly modified (Fig. 3); posterior incision of sternite VIII distinctly less than half the length of sternite (Fig. 4); aedeagus approximately 1.2 mm long; dorsal plate symmetric, apically acute, and with weakly pronounced pair of dorsal carinae; ventral process strongly asymmetric (Figs 5-8).

♀: sternite VIII moderately oblong, posterior margin obtusely angled (Fig. 9); sternite IX posteriorly extensively sclerotised, antero-lateral projections short (Fig. 10).



**Figs 9-12:** *Leptobium korbi* (EPPELSHEIM) (9-10) and *L. tronqueti* LECOQ (11-12): (9, 11) female sternite VIII; (10, 12) female sternite IX. Scale bars: 0.5 mm.

**Comparative notes:** The species is characterised particularly by the combination of the uniformly reddish-brown coloration and the morphology of the aedeagus. From other species distributed in southern Spain, except *L. tronqueti*, it is separated by the coloration alone. In external morphology it is practically indistinguishable from *L. tronqueti* (except for slightly smaller average body size and slightly different head shape), but the aedeagus is of completely different morphology (*L. tronqueti*: apex of dorsal plate conspicuously acute in ventral view and distinctly curved in lateral view, ventral process apically rounded and almost symmetric in ventral view), the pubescence of the male sternite VII (*L. tronqueti*: middle without pubescence), the less deep posterior incision of the male sternite VIII, the shape of the female sternite VIII (*L. tronqueti*: more oblong and more strongly produced posteriorly, see Fig. 11), and the morphology of the female sternite IX (*L. tronqueti*: apically much less extensively sclerotised, antero-lateral projections longer, see Fig. 12). For illustrations of the sexual characters of *L. tronqueti* (as *L. korbi*) see ASSING (2005a) and Figs 11-12.

**Distribution and bionomics:** The species is currently known only from the type locality (Medina Sidonia), from two localities in the Sierra de Luna and one locality to the west of Tarifa. The recently collected material listed above, in total 55 specimens, were collected in a stony pasture near the shore of a reservoir after very

heavy rainfall, together with only two specimens of *L. tronqueti*. Remarkably, in nearby pastures close to the same reservoir, only *L. tronqueti* was collected under similar circumstances.

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### Zusammenfassung

*Leptobium tronqueti* LECOQ 1986, bisher Synonym von *L. korbi* (EPPELSHEIM 1891), wird revalidiert. Die männlichen Geschlechtsmerkmale von *L. korbi* sowie die weiblichen sekundären Sexualmerkmale von *L. korbi* und *L. tronqueti* werden erstmals beschrieben und abgebildet. *Dolicaon canariensis* FAUVEL 1898, nov.syn., wird mit *L. nigricolle nigricolle* (WOLLASTON 1862) synonymisiert. Weitere Nachweise von 14 *Leptobium*-Arten werden aus der Westpaläarktis gemeldet. Die Gattung umfasst derzeit insgesamt 65 Arten und zwei Unterarten.

### References

- ASSING V. (1999): A revision of the Canarian species of *Leptobium* CASEY (Coleoptera, Staphylinidae: Paederinae). — Linzer biologische Beiträge **31** (2): 693-712.
- ASSING V. (2005): A revision of the genus *Leptobium* CASEY (Coleoptera: Staphylinidae: Paederinae). — Stuttgarter Beiträge zur Naturkunde, Serie A (Biologie), Nr. **673**: 1-182.
- ASSING V. (2006): A revision of *Leptobium* CASEY. Supplement I (Insecta: Coleoptera: Staphylinidae, Paederinae). — Linzer biologische Beiträge **38** (1): 381-384.
- ASSING V. (2009a): A revision of *Leptobium* CASEY. IV. Three new species and additional records (Coleoptera: Staphylinidae: Paederinae). — Stuttgarter Beiträge zur Naturkunde Serie A, Neue Serie **2**: 227-236.
- ASSING V. (2009b): Two new species of Paederinae from the Greek island Samos (Coleoptera: Staphylinidae). — Linzer biologische Beiträge **41** (1): 437-443.
- ASSING V. (2009c): A revision of *Leptobium* CASEY. III. A new species from Iran and additional records (Coleoptera: Staphylinidae: Paederinae). — Linzer biologische Beiträge **41** (2): 1247-1252.
- COIFFAIT H. (1954): Nouveaux *Dolicaon* du sous-genre *Leptobium* CASEY. — Revue française d'Entomologie **21**: 94-99.
- EPPELSHEIM E. (1891): Ueber *Dolicaon rubripennis* REITT. und einen weiteren neuen *Dolicaon* aus der paläarktischen Zone. — Wiener entomologische Zeitung **10**: 225-226.
- FAUVEL A. (1898): Catalogue des Staphylinides de Barbarie et des Iles Açores, Madères, Salvages et Canaries. Supplement. Description des espèces nouvelles. — Revue d'Entomologie **17**: 93-113.
- LECOQ J.-C. (1986): Description d'une nouvelle espèce de *Leptobium* d'Espagne: *L. tronqueti*, n. sp. (Coleoptera, Staphylinidae). — L'Entomologiste **42**: 357-358.

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